

PORTLAND GENERAL ELECTRIC COMPANY

ELECTRIC BUILDING

PORTLAND, OREGON 97205

GEORGE J. EICHER
MANAGER

DEPT. OF ENVIRONMENTAL SERVICES

October 7, 1974

Mr. Kessler R. Cannon, Director
Department of Environmental Quality
Attn: E. J. Weathersbee, Regional Administrator
1010 N. E. Couch Street
Portland, Oregon 97232

Dear Mr. Weathersbee:

This is to request an extension of time in which to comment on the NPDES Permit for our Station "L".

Because this proposed permit was sent to the plant itself rather than to me, I have only received it on October 3 and obviously cannot respond by the listed October 4 final date. Your Dick Nichols has verbally agreed to a two-week extension to October 18, which will be satisfactory.

I would greatly appreciate it if further material of this nature is sent directly to me.

Yours very truly,

George J. Eicher, Manager
Dept. of Environmental Services

GJE:llw
cc: ✓ S. Katkansky

PORTLAND GENERAL ELECTRIC COMPANY

ELECTRIC BUILDING

PORTLAND, OREGON 97205

GEORGE J. EICHER
MANAGER

DEPT. OF ENVIRONMENTAL SERVICES

October 16, 1974

Oregon Department of Environmental
Quality, Northwest Region Office
1010 N. E. Couch Street
Portland, Oregon 97232

Attention: Mr. E. J. Weathersbee, Administrator

Gentlemen:

Reference is made to your letter of September 20, 1974 requesting our comments on the proposed NPDES Permit for the Station "L" generating plant. Since this proposed permit was sent to the plant itself rather than to me and I received it on October 3, the listed October 4 final date could not be met. Further communication with your office resulted in a two-week extension to October 18. We appreciate the opportunity to comment on the proposed permit. Our comments are listed below.

Fact Sheet

Proposed Special Conditions.

Item 1. We suggest no discharges be allowed between either June 1 and October 31 or when the river flow drops below 10,000 cfs as measured at Salem.

Item 3. The proposed allowable mixing zone in the depth aspect is given here as a maximum of 10 feet. No depth aspect is mentioned in Item S10 of the Permit.

Permit Conditions

S8. We suggest no discharges be allowed between either June 1 and October 31 or when the river flow drops below 10,000 cfs as measured at Salem.

Some leeway needs to be provided for keeping the traveling screens clear of river debris. In order to prevent a complete failure of this equipment the screens are

operated for approximately six hours every three months regardless of plant operation. This involves running the screens and pumping river water through them to wash out the debris. The rate of flow during this time does not exceed the amount permitted under Paragraph S6.

Seepage into the lower levels of the plant will occur at any time the river stage is above 16 feet. This must be pumped back to the river often after the June 1 deadline. This pumping must be done even though the plant is not operating.

S10. No mention is made here of a depth aspect (maximum of 10 feet) for the allowable mixing zone as was done on the Fact Sheet.

S13 and 14. We request that monitoring and subsequent reporting be required only when the plant is operating or discharging to the Willamette River.

S16. There should be some reconciliation between the cooling water discharge elevation and the maximum 10-foot mixing restriction as given on the Fact Sheet.

G2a, b. Shall this monitoring and reporting begin before or during the period in which the plant is not in operation or discharging to the Willamette River?

G3. Strike the word "and" at the beginning of the fourth line.

G7c. Strike the phrase "or any other condition" in the first line.

G11. We recognize that the State, its departments, agents and employees while acting within the scope of a valid statute are immune from personal liability. This immunity, however, does not extend to situations where an employee or agent of the State, for example, acts beyond the authority of a governing statute or properly adopted rules, regulations or standards. It also does not exempt a State agency or the agency's employees where the legislature provides otherwise, such as in the situation of a Federal Tort Claims Act or a Little Tort Claims Act such as exists in the State of Oregon. PGE should not be required to contract these rights away. In view of the latter considerations, we feel

that C11 should be modified by inserting before the word
"The" in the first line the following phrase: "Unless
otherwise permitted by applicable statute or judicial
decision, the Department of Environmental Quality . . .".

We would be happy to discuss these comments with you at your convenience.

Very truly yours,

George J. Eicher, Manager
Dept. of Environmental Services



DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-7685

TOM McCALL
GOVERNOR

October 18, 1974

KESSLER R. CANNON
Director

Portland General Electric Company
Station L Power Plant
621 S.W. Alder
Portland, Oregon 97205

Gentlemen:

Re: Waste Discharge Permit, File No. 69160

This is the draft of the permit that was sent out on notice on October 18, 1974. The public notice period will be up November 17, 1974, after which the permit will be issued.

If you have any further comments, please let us know within this 30 day period.

Very truly yours,

KESSLER R. CANNON
Director

Charles K. Ashbaker
Administrator
Water Pollution Control Division

TPS:ljb

Enclosure



PUBLIC NOTICE AND FACT SHEET

Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Application No. OR-002704-9

Date: OCT 18 1974

County: Multnomah

File No. 69160

This public notice and fact sheet has been prepared to provide public information concerning the following application for a National Pollutant Discharge Elimination System Permit to discharge pollutants to navigable waters pursuant to the provisions of Oregon Revised Statutes (ORS) 449.083 and the Federal Water Pollution Control Act Amendments of 1972, P. L. 92-500, October 18, 1972.

APPLICANT: Portland General Electric Company
Station L Power Plant
621 S. W. Alder
Portland, Oregon 97205

DESCRIPTION OF FACILITY AND DISCHARGE:

The Portland General Electric Company owns and operates a 30 megawatt steam electric generating plant on the Willamette River in Portland. Plant operation would be only on emergency demand of the regional power pool and even then would be completely dependent upon the availability of natural gas on an "interruptable" supply arrangement. Boiler feed is City of Portland water and pretreated. Turbine condenser cooling water is discharged at a rate of 64.6 million gallons per day (MGD), and its temperature is about 150°F. above the temperature of the Willamette River. Service water for river draft screen cleaning, air compressor cooler and bearing water accounts for a 4.0 MGD discharge to the river.

TENTATIVE DETERMINATION, APPLICABLE EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS

The Department of Environmental Quality has reviewed the application and has tentatively determined to issue a permit to discharge subject to lawful rules and regulations, water quality standards for the Multnomah Channel and the main stem Willamette River contained in OAR 340-41-045, applicable effluent guidelines and limitations and certain special conditions. A final determination will not be made until after all comments received, pursuant to the public notice, have been evaluated.

The receiving stream has been classified for the following beneficial uses: fish and other aquatic and animal life rearing, passage and habitat; fishing, hunting, boating and other water contact recreation, domestic, industrial, irrigation and livestock water uses, navigation, aesthetic qualities.

The effluent limitations are based upon plant design capabilities, State of Oregon Water Quality Standards, and Environmental Protection Agency effluent standards.

PROPOSED EFFLUENT LIMITATIONS

<u>Parameter</u>	<u>Limitation</u>	
<u>Condenser Cooling Water Discharge:</u>		
Flow	64.7 MGD	
Temperature	shall not exceed 15°F. above the river temperature.	
pH	shall not be outside the range 6.5-9.0	
<u>Service Water Discharge:</u>		
	<u>Before July 1, 1977</u>	<u>After July 1, 1977</u>
Flow	4.0 MGD	4.0 MGD
Settleable Solids	Lowest Practicable Level	1 ml/l
Floating Solids	Lowest Practicable Level	none visible

PROPOSED SCHEDULE OF COMPLIANCE.

1. Concept proposal shall be submitted by July 1, 1978 for facilities for meeting Environmental Protection Agency thermal standards by July 1, 1980.
2. Detailed plans shall be submitted by October 1, 1976 for facilities to be installed by July 1, 1977 to treat screen backwash portion of service water discharge to meet above effluent limitations.

PROPOSED SPECIAL CONDITIONS

1. No discharges shall be allowed between June 1 and October 31.
2. The permittee shall cease operations when notified that a fishery or other resource is likely to be damaged by the discharge.
3. The proposed allowable mixing zone shall not exceed a segment of the Willamette River from the point of discharge to 200 feet out into the river and extending from 200 feet upstream from the point of discharge to 400 feet downstream to a maximum depth of 10 feet.
4. Pertinent monitoring of the plant operations and discharges will be required.
5. The proposed expiration date is March 31, 1979.

LNC



Portland General Electric Company

June 13, 1988
ES-119-88L
GEN A/S 7

Mr. Harry Edmonds
Industrial Waste Engineer
City of Portland
Bureau of Environmental Services
1120 SW Fifth Avenue
Portland OR 97204

Dear Harry:

Portland General Electric Company needs to empty two large underground storage tanks which contain water with trace amounts of polychlorinated biphenyls (PCB) below detection. These tanks, one 21,000 gallon tank (<0.50 ppb PCB) and one 210,000 gallon tank (<0.50 ppb PCB), are located near SE Water Avenue along the river on the eastside of downtown Portland. The total amount of PCB contained in the estimated 190,000 gallons of water has been calculated to be less than 0.4 grams.

These tanks were built in place in 1936 to provide fuel oil storage for steam-electric generating at Station L. They were taken out of service in 1963 and filled with water to keep them in the ground. In 1986 Station L, including these tanks, was donated to OMSI. PGE intends to leave the tanks empty for OMSI.

PGE requests approval from the City of Portland Bureau of Environmental Services to process this water by removing any floating oil and then discharging the water into the sanitary sewage system. In order to prevent discharges of oils, any floating oil will be pumped off the water surface and/or oil absorbent pads will be used. Because PCBs are soluble in oils but not in water, PGE believes this will reduce the levels of PCB to those which are below detection using standard analytical techniques (EPA Method 608) available at a commercial

Harry Edmonds
June 13, 1988
Page 2

laboratory. Data on oil and grease show concentrations less than 100 mg/L in the water: 1 ppm for the large tank, and 36.5 ± 16 ppm (n=2) for the small tank. While some priority pollutants are present in the water in the small tank, they are probably attached to any oils present because they are either insoluble or only slightly soluble in water. Additionally, some of the chemicals present, such as acetone and other ketones, and the benzenes will be degraded by the bacteria in the anaerobic digester. For your convenience, all laboratory reports for these two tanks are enclosed.

PGE technical staff has met with you and your staff to discuss requirements and specifications in more detail to achieve this reasonable and practical solution to disposing of the water from these tanks.

If you have questions or need additional information, please contact me at 226-5661.

Sincerely,



R. J. Hess
Manager
Environmental Sciences

LMC
RJH:LMC:dmb

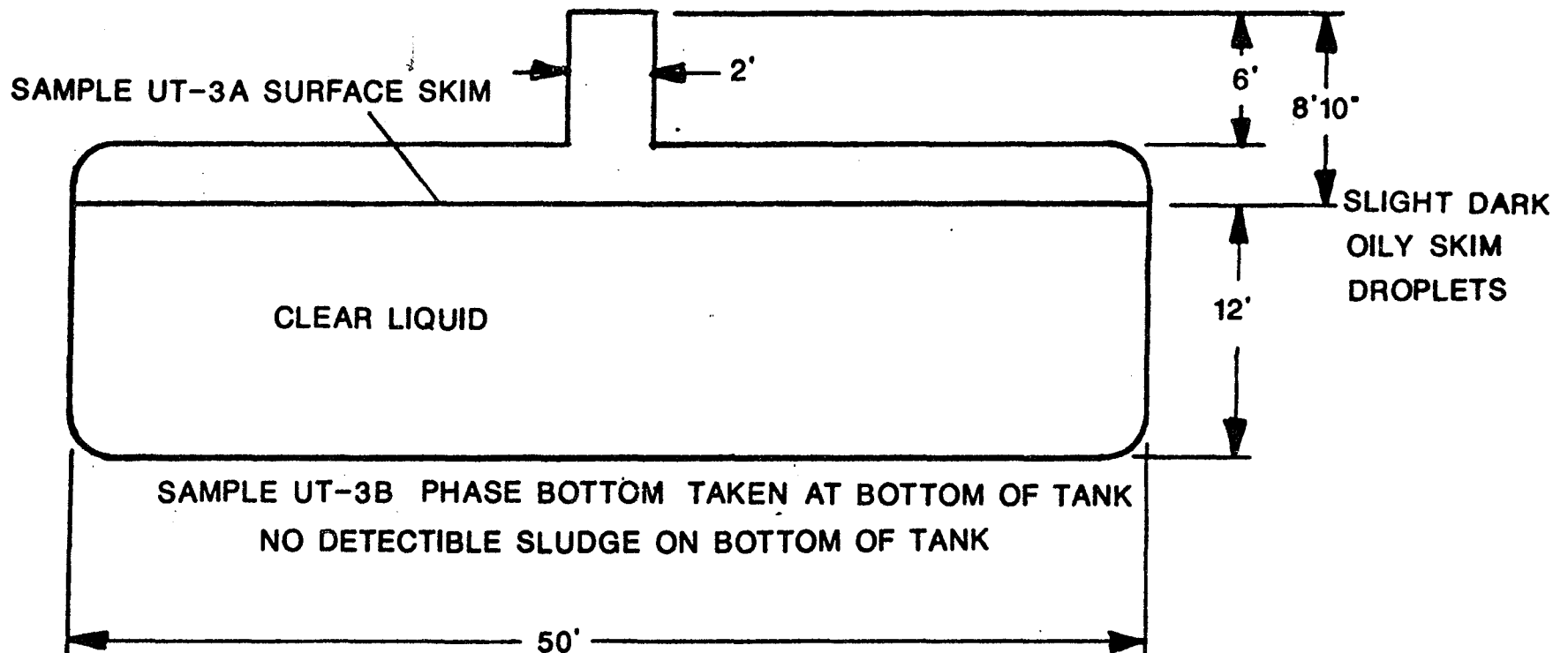
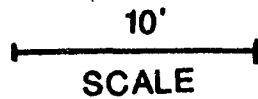
c: Dorothy Rothrock
Dennis Norton
Bill Lawson

Enclosures
es 1604

UT-3 UTILITY TANK-SOUTH TANK (LARGE)

210,000 GALS. CAPACITY

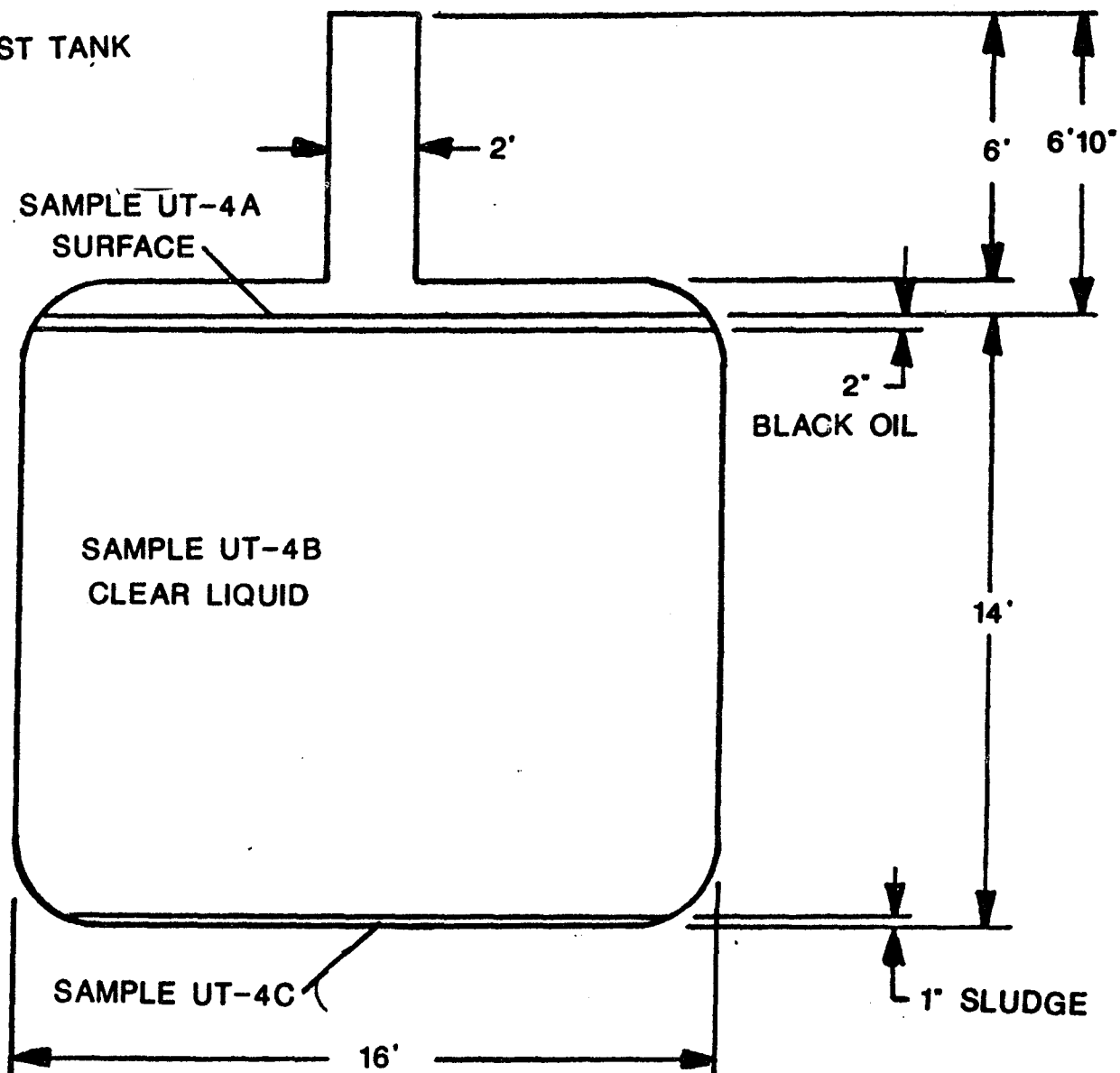
2 SEP 87



UT-4 UTILITY TANK-WEST TANK
21,000 GALS. CAPACITY

2 SEP 87

5'
SCALE



OREGON ANALYTICAL LABORATORY
14655 S. W. OLD SCHOLLS FERRY RD
BEAVERTON, OREGON 97007
TELEPHONE: (503) 644-5300

PCB WATER TEST REPORT

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*
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*
GEORGE NORMINE - EM&C

DATE RECEIVED: 87-09-22
REVIEWED BY: JAY BETTINESKI
JEB
----- CHEMISTRY SUPERVISOR
REPORT DATE: 88-03-09

DAL SAMPLE NO. 47-2004-	TRANSFORMER NO. OR SAMPLE IDENTIFICATION	AROCLOR TYPE	PCB UG/L
19655	873817003UT3	-----	ND
19656	873817004UT4	-----	ND

ND = NONE DETECTED (<0.5 UG/L)

G. NORMINE, D. NORTON
HAWTH TB-14

PORTLAND GENERAL ELECTRIC CO.
ANALYTICAL SERVICES
SAMPLE DATA SHEET

USER STATION L PROJEC
480

SAMPLE GROUP NO. 48-2004
NO. OF SAMPLES 04

DESCRIPTION STATION L
NO. OF TESTS 01

DATE LOGGED 1

ASI JOB TEST RESULTS
NO. DESCRIPTION

-----S A M P L E S A N D T E S T R E S U L T

01412	01413	01414	01415
<u>880309UT-3A</u>	<u>880309UT-3B</u>	<u>880309UT-4A</u>	<u>880309UT-4B</u>
880309	880309	880309	880309

1640 45 OIL & GR MG/L

1. 11. 48. 25.

CONSTRUCTION INSPECTION
MATERIALS INSPECTION
CHEMICAL ANALYSIS
PHYSICAL TESTING

5405 N. Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217-0126
Phone: (503) 289-1778

NON-DESTRUCTIVE TESTING
WELDING CERTIFICATION
SOIL TESTING
ASSAYING

September 24, 1987

Oregon Analytical Lab
14655 SW Old Scholls Ferry Road
Beaverton, Oregon 97007

Attn: Jay Bettineski

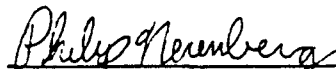
Subject: Analysis of seven (7) samples submitted
on 9-16-87.


Report:

Results:

<u>Sample</u>	<u>Trichloroethane</u>	<u>Tetrachloroethylene</u>
UT-2A	9.4 ppm	2.5 ppm
UT-2B	1.7 ppm	0.2 ppm
UT-3A	<0.1 ppm	<0.1 ppm
UT-3B	<0.1 ppm	<0.1 ppm
UT-4A	2.0 ppm	<0.1 ppm
UT-4B	0.2 ppm	<0.1 ppm
UT-4C	5.4 ppm	<0.1 ppm

Sincerely,
NORTHWEST TESTING LABORATORIES, INC.


Philip Nerenberg, Chemist


Howard B. Holmes
Assistant Supervisor, Chemistry

Report Number 308692



am test inc.

14603 N.E. 87th St. • REDMOND, WASHINGTON 98052 • 206/885-1664

ANALYSIS REPORT

CLIENT: Oregon Analytical Laboratory DATE RECEIVED: 4/26/88
REPORT TO: Howard Boorse DATE REPORTED: 5/18/88
14655 S.W. Old Scholls Ferry Rd. DATE ANALYZED: 5/17/88
Beaverton, OR 97007

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUND		
Aniline	ND	1.0
2-Chlorophenol	ND	1.0
Bis(2-Chloroethyl) Ether	ND	1.0
Phenol	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0
Benzyl Alcohol	ND	1.0
Bis(2-Chloroisopropyl) Ether	ND	1.0
2-Methylphenol	ND	1.0
Hexachloroethane	ND	1.0
N-Nitrosodipropylamine	ND	1.0
Nitrobenzene	ND	1.0
4-Methylphenol	ND	1.0
Isopherone	ND	1.0
2-Nitrophenol	ND	1.0
2,4-Dimethylphenol	ND	1.0
Bis(2-Chloroethoxy) Methane	ND	1.0
2,4-Dichlorophenol	ND	1.0
1,2,4-Trichlorobenzene	ND	1.0
Naphthalene	ND	1.0
Benzoic Acid	ND	5.0
4-Chloroaniline	ND	1.0
Hexachlorobutadiene	ND	1.0
2-Methylnaphthalene	ND	1.0
4-Chloro-3-Methylphenol	ND	1.0
Hexachlorocyclopentadiene	ND	2.0
2,4,6-Trichlorophenol	ND	2.0
2,4,5-Trichlorophenol	ND	2.0
2-Chloronaphthalene	ND	1.0
2-Nitroanline	ND	1.0
Acenaphthylene	ND	1.0
Dimethyl Phthalate	ND	1.0
2,6-Dinitrotoluene	ND	2.0
Acenaphthene	ND	1.0
3-Nitroaniline	ND	2.0

ND = Not Detected

Continued



CLIENT: Oregon Analytical Laboratory

DATE RECEIVED: 4/26/88

REPORT TO: Howard Boorse

DATE REPORTED: 5/18/88

DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUNDS

2,4-Dinitrophenol	ND	5.0
Dibenzofuran	ND	1.0
2,4-Dinitrotoluene	ND	2.0
4-Nitrophenol	ND	4.0
Fluorene	ND	1.0
4-Chlorophenyl Phenyl Ether	ND	1.0
Diethyl Phthalate	ND	1.0
4-Nitroaniline	ND	3.0
2-Methyl-4,6-Dinitrophenol	ND	5.0
N-Nitrosodiphenylamine	ND	1.0
Azobenzene	ND	1.0
4-Bromophenyl Phenyl Ether	ND	2.0
Hexachlorobenzene	ND	2.0
Pentachlorophenol	ND	5.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Di-N-Butyl Phthalate	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzidine	ND	3.0
Benzyl Butyl Phthalate	ND	1.0
Benzo(a)Anthracene	ND	1.0
Chrysene	ND	1.0
3,3-Dichlorobenzidine	ND	3.0
Bis(2-Ethylhexyl)Phthalate	20.0	1.0
Di-N-Octyl Phthalate	ND	1.0
Benzo(b)Fluoranthene	ND	1.0
Benzo(k)Fluoranthene	ND	1.0
Benzo(a)Pyrene	ND	1.0
Indeno(1,2,3-cd)Pyrene	ND	1.0
Dibenzo(a,h)Anthracene	ND	1.0
Benzo(g,h,i)Perylene	ND	1.0

Surrogates

	<u>Amt. Spiked</u>	<u>% Recovery</u>
2-Fluorophenol	39.	50.
D ₆ -Phenol	27.	50.
D ₅ -Nitrobenzene	56.	25.
2-Fluorobiphenyl	59.	25.
2,4,6-Tribromophenol	78.	50.
D ₁₄ -Terphenyl	85.	25.

ND = Not Detected

Continued



-3-

CLIENT: Oregon Analytical Laboratory DATE RECEIVED: 4/26/88
REPORT TO: Howard Boorse DATE REPORTED: 5/18/88
 DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805108	Detection
Client Identification	880422UT4	Limit
		(ug/l)

COMPOUND		
Aniline	ND	8.0
2-Chlorophenol	ND	8.0
Bis(2-Chloroethyl) Ether	ND	8.0
Phenol	ND	8.0
1,3-Dichlorobenzene	ND	8.0
1,4-Dichlorobenzene	ND	8.0
1,2-Dichlorobenzene	ND	8.0
Benzyl Alcohol	ND	8.0
Bis(2-Chloroisopropyl) Ether	ND	8.0
2-Methylphenol	13.6	8.0
Hexachloroethane	ND	8.0
N-Nitrosodipropylamine	ND	8.0
Nitrobenzene	ND	8.0
4-Methylphenol	23.2	8.0
Isophenone	ND	8.0
2-Nitrophenol	ND	8.0
2,4-Dimethylphenol	48.8	8.0
Bis(2-Chloroethoxy) Methane	ND	8.0
2,4-Dichlorophenol	ND	8.0
1,2,4-Trichlorobenzene	ND	8.0
Naphthalene	44.0	8.0
Benzoic Acid	ND	40.0
4-Chloroaniline	ND	8.0
Hexachlorobutadiene	ND	8.0
2-Methylnaphthalene	104.	8.0
4-Chloro-3-Methylphenol	ND	8.0
Hexachlorocyclopentadiene	ND	16.0
2,4,6-Trichlorophenol	ND	16.0
2,4,5-Trichlorophenol	ND	16.0
2-Chloronaphthalene	ND	8.0
2-Nitroaniline	ND	8.0
Acenaphthylene	ND	8.0
Dimethyl Phthalate	ND	8.0
2,6-Dinitrotoluene	ND	16.0
Acenaphthene	ND	8.0
3-Nitroaniline	ND	16.0
2,4-Dinitrophenol	ND	40.0
Dibenzofuran	ND	8.0

ND = Not Detected

Continued



-4-

CLIENT: Oregon Analytical Laboratory DATE RECEIVED: 4/26/88
REPORT TO: Howard Boorse DATE REPORTED: 5/18/88
 DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805108	Detection
Client Identification	880422UT4	Limit
		(ug/l)

COMPOUNDS

2,4-Dinitrotoluene	ND	16.0
4-Nitrophenol	ND	32.0
Fluorene	ND	8.0
4-Chlorophenyl Phenyl Ether	ND	8.0
Diethyl Phthalate	ND	8.0
4-Nitroaniline	ND	24.0
2-Methyl-4,6-Dinitrophenol	ND	40.0
N-Nitrosodiphenylamine	ND	8.0
Azobenzene	ND	8.0
4-Bromophenyl Phenyl Ether	ND	16.0
Hexachlorobenzene	ND	16.0
Pentachlorophenol	ND	40.0
Phenanthrene	16.0	8.0
Anthracene	ND	8.0
Di-N-Butyl Phthalate	ND	8.0
Fluoranthene	ND	8.0
Pyrene	ND	8.0
Benzidine	ND	24.0
Benzyl Butyl Phthalate	ND	8.0
Benzo(a)Anthracene	ND	8.0
Chrysene	ND	8.0
3,3-Dichlorobenzidine	ND	24.0
Bis(2-Ethylhexyl)Phthalate	24.0	8.0
Di-N-Octyl Phthalate	ND	8.0
Benzo(b)Fluoranthene	ND	8.0
Benzo(k)Fluoranthene	ND	8.0
Benzo(a)Pyrene	ND	8.0
Indeno(1,2,3-cd)Pyrene	ND	8.0
Dibenzo(a,h)Anthracene	ND	8.0
Benzo(g,h,i)Perylene	ND	8.0

Surrogates

	<u>Amt. Spiked</u>	<u>% Recovery</u>
2-Fluorophenol	58.	50.
D ₆ -Phenol	45.	50.
D ₅ -Nitrobenzene	80.	25.
2-Fluorobiphenyl	77.	25.
2,4,6-Tribromophenol	88.	50.
D ₁₄ -Terphenyl	74.	25.

ND = Not Detected

Continued



-6-

CLIENT: Oregon Analytical Laboratory DATE RECEIVED: 4/26/88
REPORT TO: Howard Boorse DATE REPORTED: 5/18/88
 DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 624

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUND		
Chloromethane	ND	5.0
Vinyl Chloride	ND	5.0
Bromomethane	ND	5.0
Chloroethane	ND	5.0
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethylene	ND	1.0
Acetone	150.	2.5
Carbon Disulfide	ND	1.0
Methylene Chloride	ND	1.0
1,2-Dichloroethylene	ND	1.0
1,1-Dichloroethane	1.0	1.0
Vinyl Acetate	ND	2.5
2-Butanone (MEK)	ND	2.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	3.0	1.0
Carbon Tetrachloride	ND	1.0
Benzene	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,2-Trichloroethylen	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
Trans-1,3-Dichloropropene	ND	1.0
4-Methyl-2-Pentanone (MIBK)	ND	2.5
Toluene	ND	1.0
Cis-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethylene	ND	1.0
2-Hexanone	ND	2.5
Chlorodibromomethane	ND	1.0
Chlorobenzene	ND	1.0
Ethyl Benzene	ND	1.0
Total Xylenes	ND	1.0
Stryrene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0

Surrogates	Amt. Spiked	% Recovery
D4-1,2-Dichloroethane	50.	101.
D8-Toluene	50.	99.
D4-Bromofluorobenzene	50.	111.

ND = Not Detected

CLIENT: Oregon Analytical Laboratory

DATE RECEIVED: 4/26/88

REPORT TO: Howard Boorse

DATE REPORTED: 5/18/88

DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 624

Laboratory Sample Number	805108	Detection
Client Identification	880422UT4	Limit (ug/l)

COMPOUND		
Chloromethane	ND	5.0
Vinyl Chloride	ND	5.0
Bromomethane	ND	5.0
Chloroethane	23.	5.0
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethylene	61.	1.0
Acetone	2,700.	2.5
Carbon Disulfide	ND	1.0
Methylene Chloride	ND	1.0
1,2-Dichloroethylene	ND	1.0
1,1-Dichloroethane	2,300.	1.0
Vinyl Acetate	ND	2.5
2-Butanone (MEK)	31.	2.5
Chloroform	1.1	1.0
1,1,1-Trichloroethane	100.	1.0
Carbon Tetrachloride	ND	1.0
Benzene	17.	1.0
1,2-Dichloroethane	8.6	1.0
1,1,2-Trichloroethylen	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
Trans-1,3-Dichloropropene	ND	1.0
4-Methyl-2-Pentanone (MIBK)	ND	2.5
Toluene	950.	1.0
Cis-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Tetrachloroethylene	ND	1.0
2-Hexanone	78.	2.5
Chlorodibromomethane	ND	1.0
Chlorobenzene	ND	1.0
Ethyl Benzene	4.6	1.0
Total Xylenes	28.	1.0
Stryrene	ND	1.0
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0

<u>Surrogates</u>	<u>Amt. Spiked</u>	<u>% Recovery</u>
D4-1,2-Dichloroethane	50.	103.
D8-Toluene	50.	99.
D4-Bromofluorobenzene	50.	102.

ND = Not Detected

REPORTED BY:

John T. M.

CONSTRUCTION INSPECTION
MATERIALS INSPECTION
CHEMICAL ANALYSIS
PHYSICAL TESTING

5405 N. Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217-0126
Phone: (503) 289-1778

NON-DESTRUCTIVE TESTING
WELDING CERTIFICATION
SOIL TESTING
ASSAYING

September 24, 1987

Oregon Analytical Lab
14655 SW Old Scholls Ferry Road
Beaverton, Oregon 97007

Attn: Jay Bettineski

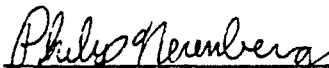
Subject: Analysis of seven (7) samples submitted
on 9-16-87.

Report:

Results:

<u>Sample</u>	<u>Trichloroethane</u>	<u>Tetrachloroethylene</u>
UT-2A	9.4 ppm	2.5 ppm
UT-2B	1.7 ppm	0.2 ppm
UT-3A	<0.1 ppm	<0.1 ppm
UT-3B	<0.1 ppm	<0.1 ppm
UT-4A	2.0 ppm	<0.1 ppm
UT-4B	0.2 ppm	<0.1 ppm
UT-4C	5.4 ppm	<0.1 ppm

Sincerely,
NORTHWEST TESTING LABORATORIES, INC.


Philip Nerenberg, Chemist


Howard B. Holmes
Assistant Supervisor, Chemistry

Report Number 308692

PRIORITY POLLUTANTS ABOVE DETECTION

STATION L--UNDERGROUND STORAGE TANKS

<u>Chemical:</u>	<u>Amount</u>	<u>Detection</u>	<u>SDWA</u>	<u>CWA</u>
2- Methylphenol	13.6	8.0	none	
4- Methylphenol	23.2	8.0	none	
2,4 dimethyl phenol	48.8	8.0	none	
Naphthalene	44.0	8.0	none	
2- Methylnaphthalene	104	8.0	none	
Phenanthrene	16.0	8.0	none	
Bis(2-ethylhexyl)phthalate	24.0	8.0	none	15000
Chloroethane	23.0	1.0	none	0.94
1,1-dichloroethane	2300	1.0	#20	
1,2-dichloroethane	8.6	1.0	none	0.94
1,1-dichloroethylene	61.0	1.0	#33	
1,1,1-trichloroethane	100	1.0	200	18400
Acetone	2700	2.5	none	
2-Butanone (MEK)	31.0	2.5	none	
2-hexanone (M n-BK)	78	2.5	none	
Chloroform	1.1	1.0	none	
Benzene	17	1.0	5	0.66
Toluene	950	1.0	2000	14500
Ethyl benzene	4.6	1.0	680	
Total Xylenes	28	1.0	440	

Note: All data are in parts per billion (ppb) or ug/L

AT

1 = acrolein = 2-propenal = acrylaldehyde = allyl aldehyde
 2 = acrylonitrile = propenenitrile = vinyl cyanide
 Styrene = vinyl benzene = phenyl ethylene =

-6-

CLIENT: Oregon Analytical Laboratory

DATE RECEIVED: 4/26/88

DATE REPORTED: 5/18/88

REPORT TO: Howard Boorse

DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 624 - 28 total volatiles

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUND		
6V Chloromethane = <i>Carbon Tet</i>	ND	5.0
31V Vinyl Chloride <i>Cl-Cl</i>	ND	5.0
5V Bromomethane	ND	5.0
9V Chloroethane	ND	5.0
Trichlorofluoromethane <i>foo2</i>	ND	1.0
16V 1,1-Dichloroethylene	ND	1.0
Acetone <i>foo3</i>	150.	2.5
Carbon Disulfide	ND	1.0
21V Methylene Chloride	ND	1.0
26V 1,2-Dichloroethylene	ND	1.0
14V 1,1-Dichloroethane	1.0	1.0
Vinyl Acetate	ND	2.5
2-Butanone (MEK) <i>foo5</i>	ND	2.5
11V Chloroform	ND	1.0
27V 1,1,1-Trichloroethane	3.0	1.0
6V Carbon Tetrachloride	ND	1.0
3V Benzene	ND	1.0
15V 1,2-Dichloroethane	ND	1.0
28V 1,1,2-Trichloroethylene	ND	1.0
17V 1,2-Dichloropropane	ND	1.0
12V Bromodichloromethane	ND	1.0
18V Trans-1,3-Dichloropropene	ND	1.0
4-Methyl-2-Pentanone (MIBK)	ND	2.5
25V Toluene	ND	1.0
18V Cis-1,3-Dichloropropene	ND	1.0
28V 1,1,2-Trichloroethane	ND	1.0
24V Tetrachloroethylene	ND	1.0
2-Hexanone	ND	2.5
8V Chlorodibromomethane	ND	1.0
7V Chlorobenzene	ND	1.0
19V Ethyl Benzene	ND	1.0
Total Xylenes	ND	1.0
Styrene	ND	1.0
5V Bromoform	ND	1.0
23V 1,1,2,2-Tetrachloroethane	ND	1.0

Surrogates

	<u>Amt. Spiked</u>	<u>% Recovery</u>
D4-1,2-Dichloroethane	50.	101.
D8-Toluene	50.	99.
D4-Bromofluorobenzene	50.	111.

ND = Not Detected



CLIENT: Oregon Analytical Laboratory

DATE RECEIVED: 4/26/88

REPORT TO: Howard Boorse

DATE REPORTED: 5/18/88

DATE ANALYZED: 5/17/88

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUNDS

5 A 2,4-Dinitrophenol	ND	5.0
Dibenzofuran	ND	1.0
27B 2,4-Dinitrotoluene	ND	2.0
7A 4-Nitrophenol	ND	4.0
32B Fluorene	ND	1.0
17B 4-Chlorophenyl Phenyl Ether	ND	1.0
24B Diethyl Phthalate	ND	1.0
4-Nitroaniline <i>ortho aniline</i>	ND	3.0
2-Methyl-4,6-Dinitrophenol	ND	5.0
43B N-Nitrosodiphenylamine	ND	1.0
30B Azobenzene = 1,2 diphenylhydrazine	ND	1.0
14B 4-Bromophenyl Phenyl Ether	ND	2.0
33B Hexachlorobenzene	ND	2.0
9A Pentachlorophenol	ND	5.0
44B Phenanthrene	ND	1.0
3B Anthracene	ND	1.0
26B Di-N-Butyl Phthalate	ND	1.0
31B Fluoranthene	ND	1.0
45B Pyrene	ND	1.0
4B Benzidine	ND	3.0
15B Benzyl Butyl Phthalate	ND	1.0
5B Benzo(a)Anthracene	ND	1.0
18B Chrysene	ND	1.0
23B 3,3-Dichlorobenzidine	ND	3.0
13B Bis(2-Ethylhexyl)Phthalate	20.0	1.0
29B Di-N-Octyl Phthalate	ND	1.0
9B Benzo(b)Fluoranthene	ND	1.0
7B Benzo(k)Fluoranthene	ND	1.0
6B Benzo(a)Pyrene	ND	1.0
37B Indeno(1,2,3-cd)Pyrene	ND	1.0
19B Dibenzo(a,h)Anthracene	ND	1.0
37B Benzo(g,h,i)Perylene	ND	1.0

Surrogates

	Amt. Spiked	% Recovery
2-Fluorophenol	39.	50.
D6-Phenol	27.	50.
D5-Nitrobenzene	56.	25.
2-Fluorobiphenyl	59.	25.
2,4,6-Tribromophenol	78.	50.
D14-Terphenyl	85.	25.

ND = Not Detected

Continued

11 Acids = 9

45 bases

**am test inc.**

14603 N.E. 87th St. • REDMOND, WASHINGTON 98052 • 206/885-1664

ANALYSIS REPORT

CLIENT: Oregon Analytical Laboratory

DATE RECEIVED: 4/26/88

DATE REPORTED: 5/18/88

DATE ANALYZED: 5/17/88

REPORT TO: Howard Boorse

14655 S.W. Old Scholls Ferry Rd.
Beaverton, OR 97007

GC/MS SEMIVOLATILES BY EPA METHOD 625

Laboratory Sample Number	805107	Detection
Client Identification	880422UT3	Limit
		(ug/l)

COMPOUND

	Aniline <i>phenylamine; aminobenzene</i>	ND	1.0
1A	2-Chlorophenol	ND	1.0
11B	Bis(2-Chloroethyl) Ether	ND	1.0
10A	Phenol	ND	1.0
21B	1,3-Dichlorobenzene	ND	1.0
22B	1,4-Dichlorobenzene	ND	1.0
20B	1,2-Dichlorobenzene	ND	1.0
	Benzyl Alcohol <i>phenylmethanol; 2-hydroxytoluene; phenylcarbinol</i>	ND	1.0
12B	Bis(2-Chloroisopropyl) Ether	ND	1.0
	2-Methylphenol <i>— Cresol</i>	ND	1.0
36B	Hexachloroethane	ND	1.0
42B	N-Nitrosodipropylamine	ND	1.0
40B	Nitrobenzene	ND	1.0
	4-Methylphenol <i>— Cresol</i>	ND	1.0
38B	Isophenone	ND	1.0
6A	2-Nitrophenol	ND	1.0
3A	2,4-Dimethylphenol	ND	1.0
10B	Bis(2-Chloroethoxy) Methane	ND	1.0
2A	2,4-Dichlorophenol	ND	1.0
46B	1,2,4-Trichlorobenzene	ND	1.0
39B	Naphthalene	ND	1.0
	Benzoic Acid	ND	5.0
	4-Chloroaniline	ND	1.0
34B	Hexachlorobutadiene	ND	1.0
	2-Methylnaphthalene	ND	1.0
	4-Chloro-3-Methylphenol <i>— Cresol</i>	ND	1.0
35B	Hexachlorocyclopentadiene	ND	2.0
11A	2,4,6-Trichlorophenol	ND	2.0
	2,4,5-Trichlorophenol	ND	2.0
16B	2-Chloronaphthalene	ND	1.0
	2-Nitroaniline <i>meta</i>	ND	1.0
2B	Acenaphthylene	ND	1.0
24B	Dimethyl Phthalate	ND	1.0
28B	2,6-Dinitrotoluene	ND	2.0
1B	Acenaphthene	ND	1.0
	3-Nitroaniline <i>para</i>	ND	2.0

ND = Not Detected

Continued

PRIORITY POLLUTANTS ABOVE DETECTION

STATION L -- UNDERGROUND STORAGE TANKS

Chemicals:

2-methylphenol	soluble in hot water
4-methylphenol	soluble in hot water
2,4-dimethyl phenol	only slightly soluble in water
naphthalene	insoluble in water
2-methylnaphthalene	insoluble in water
phenanthrene	insoluble in water
bis (2-ethylhexyl) phthalate	slightly soluble in water
chloroethane	slightly soluble in water
1,1-dichloroethane	very sparingly soluble in water
1,2-dichloroethane	slightly soluble in water
1,1-dichloroethylene	not soluble in water
1,1,1-trichloroethane	insoluble in water
acetone	miscible in water
2-butanone (MEK)	9 to 22% soluble by weight
2-hexanone (MBK)	not soluble in water
chloroform	slightly soluble in water
benzene	only slightly soluble in water
toluene	insoluble in water
ethylbenzene	almost insoluble in water
total xylenes	insoluble in water

Synonyms

cresol	methylphenol
o-cresol	2-methylphenol
p-cresol	4-methylphenol
xlenol	dimethylphenol (5 isomers)
xylene	dimethylbenzene
toluene	methylbenzene, phenylmethane
acetone	dimethylketone, 2-propanone
chloroethane	vinyl chloride
chloroform	trichloromethane

PRIORITY POLLUTANTS ABOVE DETECTION

STATION L--UNDERGROUND STORAGE TANKS

Chemical:

2- Methylphenol - sol. Hot water
4- Methylphenol " " "
2,4 dimethyl phenol - only slightly sol. H₂O
Naphthalene - insoluble water
2- Methylnaphthalene insoluble water
Phenanthrene insol. water
Bis(2-ethylhexyl)phthalate sl. sol. water
Chloroethane slightly sol. water
1,1-dichloroethane very sparingly sol. water
1,2-dichloroethane sl. sol. water
1,1-dichloroethylene not sol. H₂O
1,1,1-trichloroethane insol. water
Acetone miscible with water
2-Butanone (MEK) 9-22% sol H₂O by wt.
2-hexanone (M ~~or~~ BK) not sol.
Chloroform = trichloromethane - slightly sol. water
Benzene only slightly soluble water
Toluene insol. water
Ethyl benzene almost insol. water
Total Xylenes(dimethyl benzene) insol. water

Cresol = methyl phenol or
hydroxymethylbenzene

m-cresol = 3-methylphenol

O-Cresol = 2-methylphenol

p-cresol = 4-methylphenol

Xylenol = dimethylphenol (5 isomers)

Toluene = methylbenzene; phenyl methane

Acetone = dimethyl ketone = 2 propanone

Chloroethane = vinyl chloride



June 29, 1988

Mr. R.J. Hess, Manager
Environmental Sciences
Portland General Electric Co.
121 S.W. Salmon, TB-14
Portland, OR 97204

Re: Station L Underground Storage Tanks UT-3 & UT-4

Dear Mr. Hess:

1120 S.W. 5th Avenue
Room 400
Portland, Oregon
97204-1972
(503) 796-7740

The City has completed its review of the technical data submitted by PGE with regard to the above-referenced storage tanks. Based on the analytical test results, the City will conditionally allow PGE to discharge the aqueous phase content from each of two underground storage tanks, UT-3 and UT-4, to the sanitary sewer. The floating oil and bottom sludge layers within each of the tanks will be prohibited from entering the public sewer. The following conditions outline the City's requirements for approving of the discharge:

1. The approximately 176,240 gallons of water comprising the aqueous phase of UT-3 may be discharged to the sewer providing there is adequate phase separation of the aqueous layer from that of the sediment and oil layers. No other pretreatment will be required.
2. In addition to the phase separation requirements outlined in item 1 above, the approximately 20,680 gallons of water comprising the aqueous phase of UT-4 shall be subject to additional pretreatment to bring the water into compliance with the Total Toxic Organic (TTO) maximum allowable discharge limitation of 1.37 mg/L. Analytical test results indicate the TTO concentration within the untreated aqueous phase of UT-4 to be 6.58 mg/L.
3. Following the phase separation and other required pretreatment, the water may be discharged to the 8" sanitary sewer flowing north along S.E. Water Avenue from an approved site within the Station L facility. The exact discharge location will be subject to City approval prior to any discharge. The maximum allowable discharge flowrate into the receiving sewer shall be limited to 100 gallons per minute. In addition, all discharges to the sewer resulting from this operation must occur during normal business hours, unless the City approves otherwise.
4. The City requires that PGE submit a proposed work plan addressing all elements comprising the selected pretreatment and discharge methodologies. An anticipated time frame should be included with the plan. The plan must be approved by the City prior to the commencement of any operation related to the underground storage tank wastewater pretreatment operation.

Continued



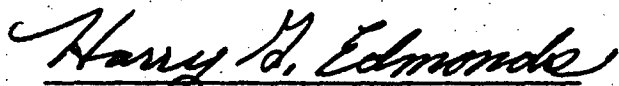
5. The City reserves the option to monitor any or all of the discharge operations, and requires that PGE provide at least 48 hours advanced notification prior to commencing the initial pretreatment and subsequent discharge operations.

6. PGE shall be responsible for maintaining professional oversight of the entire operation. The City reserves the right to suspend the wastewater discharge operation if a designated City representative finds the any element of the approved work plan is not being adhered to.

7. PGE shall be responsible for payment of an administrative fee in the amount of \$150.00 (Flat Fee). In the event that the City Pollution Control Laboratory is required to perform resampling of the pretreated effluent, PGE will be responsible for reimbursing the City at the rate of \$125.00 per day per sampling point (please refer to City Code Chapter 17.36.060(G), enclosed). While the extent of resampling by the City cannot be determined at this time, the City will agree to establish a ceiling of ten (10) resampling events should they be required. Payment of administrative and resampling fee's will be due within 30 days following the formal submittal of the final bill to PGE by the City.

To signify your acceptance of conditions 1 through 7 as outlined above, please have an authorized PGE representative sign this agreement where indicated, and return a signed copy to the Industrial Waste Section. Also please submit a copy of the proposed workplan (as outlined in item 4) at your earliest convenience for City review to avoid any delay in obtaining final City approval. If you have any questions please contact either Harry Edmonds or Glenn Beyerman at 796-7584.

Sincerely,



Harry G. Edmonds, P.E.
Industrial Waste Engineer

HGE:gb
Enclosure

cc: Tom Bottenberg (City)
Jim Cooke (City)

ACCEPTANCE OF TERMS AND CONDITIONS:

I have read and accept the terms and conditions of this Agreement:

Signature of Authorized Representative

Date

Title



Portland General Electric Company

October 25, 1988

ES-386-88L

GEN ENV. 9C
11-6

Mr Harry Edmonds, Industrial Waste Engineer
City of Portland
Bureau of Environmental Sciences
1120 SW 5th Ave
Portland OR 97204-1972

Dear Mr. Edmonds:

As you have requested, Portland General Electric Company is submitting to the City a work plan addressing the selected pretreatment and methodologies to discharge 180,000 gallons of water from two underground storage tanks at Station L into the City sewer. Also enclosed is a signed copy showing PGE acceptance of the terms and agreement to the conditions stated in your letter to R. J. Hess, PGE, dated June 29, 1988.

The City has agreed to meet with PGE before any work begins to approve and verify the designated sanitary sewer manhole to receive the discharged water. Necessary drawings and technical specifications will be submitted to the City in the permitting process.

PGE had originally planned to discharge the contents of approximately 225 barrels of water and antifreeze at this time to take advantage of the mobilization of equipment and personnel. This is not possible. When these barrels are relocated from the Station L building and ready for processing, PGE will submit to the city a work plan prior to initiation on actual work.

PGE appreciates the time and effort you and your staff have expended on this project. If you have questions or need additional information, please contact me at 226-5666 or Lolita Carter at 226-5616.

Sincerely,

R. J. Hess, Manager
Environmental Sciences

lmc
RJH:LMC:slc

c: William Lawson
Robert Van Bishler
Dennis Norton
George Normine
Sharon Gitt

zes 1771

PORTLAND GENERAL ELECTRIC COMPANY
WORK PLAN
UNDERGROUND STORAGE TANKS
STATION L

PURPOSE:

The following is a Work Plan for removal of oil, water, and sludge from tanks UT-3 and UT-4. A site plan is attached showing the approximate location of the work area and the proposed route for the discharge pipeline into the sanitary sewer manhole.

WORK PLAN

PHASE I - MOBILIZATION

1.1 Design and Specifications

PGE's System Planning & Engineering will prepare plans and specifications.
City of Portland to approve and verify manhole to be used for discharging water.

1.2 Permits

PGE shall acquire the necessary permits prior to beginning pumping operations.
Post notices in the area, if required.
Complete requirements of the permit for confined entry by workers.

1.3 Bidding and Awarding of Contract

PGE shall issue the bid package to contractors.
A site review will be conducted by PGE.
Bid opening.

1.4 Site Preparation

Equipment lay-down area to be established.
Piping route to be selected.
Work area to be fenced and notices posted.

1.5 Equipment

shall be moved onto the site and mobilized for pumping oil, water and sludge. PGE approved plastic sheeting shall be placed under equipment and piping as required by the PGE Engineer.

1.6 Sampling

City of Portland shall be provided a point for taking samples of the activated Carbon Adsorption Unit (ACAU) treated water. PGE shall reimburse the city at \$125 per sample for up to ten samples.

1.7 Safety

The contractor shall comply with OSHA Safety Requirements for confined entry into tanks.

PHASE II - IMPLEMENTATION

11.1 Startup

Test run pump and check piping for leaks. If leaks are detected repair as required. Use clean potable water while conducting tests of system operation.

11.2 Oil Removal

Use oil skimming equipment approved by the engineer. Skim oil from tanks. Skim oil from settling tank. Skimmed oil to be deposited into oil drums or a portable tank. Store oil for disposal. Oil to be shipped by PGE to an approved disposal site. Use oil sorbent materials to remove oil sheen from water surfaces. The oil soaked sorbent materials shall be placed into barrels and stored for disposal by PGE.

11.3 Tank UT-3 (south) (200,000 gallons)

Pump water from tank UT-3 at a rate of 50 to 100 gallons per minute into a city approved sewer manhole. The designated city sanitary sewer manhole is located near SE Market Street and SE Water Avenue. Actual manhole location shall be verified by the engineer prior to discharging water to the sewer.

11.4 Tank UT-4 (west) (20,000 gallons)

Water in tank UT-4 shall be pumped through two ACAU connected in series. Suggested vendor - Calgon Carbon Corporation. The Disposorb is a 350 gallon unit. Flow rate for the ACAU is not to exceed 30 GPM. The City of Portland will take water samples at their discretion.

11.5. Sludge

Sludges will be removed and packaged for disposal by PGE.

PHASE III - DEMOBILIZATION

111.1 Purge

Pump clean potable water through the system to remove residual tank liquids.

111.2 Dismantle Equipment

Drain piping and disconnect sections of pipe.
Clean and remove pump system.
Disconnect and drain ACAU.
PGE to manage ACAUs as required.

111.3 Tank Closures

Replace lids to tanks and secure against re-entry.

111.4 Decontamination

Equipment, tools, personnel protection equipment and other materials to be removed from the site, shall be decontaminated or disposed of as required.

111.5 Final Report

The final report to PGE shall include original or copies of data on samples, results of analysis, permits, invoices for equipment and materials, transportation invoices, daily field notes, drawings, specifications, documentation of disposal and pertinent correspondence with governmental agencies.

zes 1771



June 29, 1988

Mr. R. J. Hess, Manager
Environmental Sciences
Portland General Electric Co.
121 S.W. Salmon, TB-14
Portland, OR 97204

Re: Station L Underground Storage Tanks UT-3 & UT-4

Dear Mr. Hess:

1120 S.W. 5th Avenue
Room 400
Portland, Oregon
97204-1972
(503) 796-7740

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4. The City requires that PGE submit a proposed work plan addressing all elements comprising the selected pretreatment and discharge methodologies. An anticipated time frame should be included with the plan. The plan must be approved by the City prior to the commencement of any operation related to the underground storage tank wastewater pretreatment operation.

Continued

CITY OF PORTLAND
ENVIRONMENTAL SERVICES



5. The City reserves the option to monitor any or all of the discharge operations, and requires that PGE provide at least 48 hours advanced notification prior to commencing the initial pretreatment and subsequent discharge operations.

6. PGE shall be responsible for maintaining professional oversight of the entire operation. The City reserves the right to suspend the wastewater discharge operation if a designated City representative finds that any element of the approved work plan is not being adhered to.

7. PGE shall be responsible for payment of an administrative fee in the amount of \$150.00 (Flat Fee). In the event that the City Pollution Control Laboratory is required to perform resampling of the pretreated effluent, PGE will be responsible for reimbursing the City at the rate of \$125.00 per day per sampling point (please refer to City Code Chapter 17.36.060(G), enclosed). While the extent of resampling by the City can not be determined at this time, the City will agree to establish a ceiling of ten (10) resampling events should they be required. Payment of administrative and resampling fee's will be due within 30 days following the formal submittal of the final bill to PGE by the City.

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Sincerely,

Harry G. Edmonds

Harry G. Edmonds, P.E.
Industrial Waste Engineer

HGE:gb
Enclosure

cc: Tom Bottenberg (City)
Jim Cooke (City)

ACCEPTANCE OF TERMS AND CONDITIONS:

I have read and accept the terms and conditions of this Agreement:

John R. Hagan
Signature of Authorized Representative

25 OCT 88
Date

GENERAL MANUFACTURING ELECTRIC AND ILLUMINATING SVCS.
Title

PORTLAND GENERAL ELECTRIC COMPANY

STATION "L"

Pump Liquids From UT-3, UT-4, and
Oil-Water Separator Skid Tank Into
City Sewer System

Scope of Work

The Contractor shall furnish superintendence, labor, tools, materials, and equipment necessary to skim oil, pump liquid, and remove sludge from two underground tanks, and an oil-water separator skid tank. This work shall be performed in accordance with the attached work plan.

The contractor shall provide a rubber-lined bermed area for pump staging. This area shall be equipped with an activated carbon adsorption unit (ACAU), pumps, piping, an oil-water separator skid tank (5,000-gallon minimum capacity), and other items required to complete the work. All items listed shall be supplied, installed, and operated by the contractor. This area shall be fenced.

The contractor shall install a pipeline to the City of Portland manhole as shown on the attached sketch. This pipeline shall be protected at roadway crossings from damage by vehicular traffic.

Maximum allowable pumping rate into manhole shall not exceed 100 gallons per minute.

After the liquids have been processed from UT-3 (approximately 200,000 gallons) and UT-4 (approximately 20,000 gallons), the Contractor shall process the liquid in a 10,000 gallon oil-water separator skid tank (about 13,000 gallons).

Regulations

The Contractor shall perform all work in accordance with the city, county, state, and federal codes.

Specifically, the Contractor shall comply with EPA Oil Spill Regulation 40 CFR, Section 112, Current Edition. In the event of an oil spill, the Contractor shall take immediate action to contain spilled oil and promptly notify PGE of the oil spill and remedial action taken to clean up the oil.

Work by Others

PGE will acquire permits for the work and disposal of liquids. PGE will supply labeled 55-gallon drums to the Contractor for skimmed oil storage and disposal. The Contractor shall write in the required data on each label after the drum has been filled with oil. PGE will store and dispose of skimmed oil and drums.

PGE will provide 10,000 gallon oil-water separator skid tank on a bermed 30-mil Hypolon liner.

PGE will provide required tests.

PGE will provide potable water to be used for operational testing of the piping system, purging, and washing.

WORK PLAN

The following work plan provides for removing oil, water, and sludge from two underground tanks (UT-3 and UT-4). In addition, approximately 13,000 gallons of liquid shall be processed from an oil-water separator skid tank. A site plan is attached showing approximate pipeline route to city-approved manhole.

Phase I - MOBILIZATION

I.1 Site Preparation

- I.1.1 Equipment lay-down area to be established and coordinated with PGE. See attached sketch.
- I.1.2 Pipe route to be selected by the contractor and approved by the PGE engineer prior to construction.
- I.1.3 Work area to be fenced and notices posted. Post as a restricted area.
- I.1.4 Install berm, ACAU, piping, oil-water separator skid tank (5,000-gallon capacity), pumps, etc. (See sketch for location.)
- I.1.5 Manhole location shall be identified and marked by the city engineer.
- I.1.6 Use potable water to test the piping system for leaks.

I.2 Equipment and Material

The Contractor shall provide skimmers, hoses, protective equipment for confined entry into tanks, oil-sorbent pads, and protective clothing. Also, he shall provide an oil-water separator skid tank (5,000-gallon capacity).

I.3 Sampling

- I.3.1 City of Portland shall be provided a point for taking samples of the Activated Carbon Adsorption Unit (ACAU)-treated water.
- I.3.2 PGE shall reimburse the city at \$125 per sample up to 10 samples. Contractor will not be responsible for sampling.

I.4 Safety

The Contractor shall comply with OSHA Safety Requirements for confined entry into tanks. The contents of each tank has been identified in the attached lab analysis.

Phase II - IMPLEMENTATION

II.1 Set-Up

- II.1.1 Work areas below and around equipment to be installed shall be covered with PGE-approved sheeting (30-mil Hypolon). Berm area.
- II.1.2 Oil-water separator skid tank (5,000 gallons) to be placed within bermed liner (30-mil Hypolon).
- II.1.3 Equipment shall be moved onto the site and mobilized for pumping oil, water, and sludge. Install fence.
- II.1.4 Install pipeline.
- II.1.5 Use clean, potable water, as supplied by PGE, while conducting tests of system operation. Test-run pump and check piping for leaks. Contractor to provide hoses from water source to work site.
- II.1.6 If leaks are detected, repair as required. System to be inspected and approved by PGE and city engineers prior to initiating pumping.

II.2 Skimmed Oil

- II.2.1 Use oil-skimming equipment approved by the engineer.
- II.2.2 Skim oil from underground tanks and pump into oil-water separator skid tank.
- II.2.3 Skim oil from oil-water separator skid tank.
- II.2.4 Skimmed oil to be deposited into labeled oil drums or a portable tank.
- II.2.5 Store skimmed oil for disposal by PGE (labeled 55-gallon barrels).
- II.2.6 Use oil-sorbent materials to remove oil sheen from water surfaces.
- II.2.7 The oil-soaked sorbent materials shall be placed in labeled barrels and stored for disposal by PGE.
- II.2.8 Oil and used oil-sorbent material to be shipped by PGE to an approved disposal site.

II.3 First, UT-3

- II.3.1 Skim oil from tank and pump into drums supplied by PGE. Contractor to fill in required information on drum label.

- II.3.2 Blot oil sheen from surface of liquid in tank. Dispose of sorbent materials into PGE-provided drums (labeled).
- II.3.3 Pump water through oil-water separator to city sewer. Pumping rate not to exceed 100 gpm. The city sewer manhole is located near SE Market Street and SE Water Avenue.
- II.3.4 Remove sludge from tank and place into labeled drums (supplied by PGE - disposal of drums by PGE).
- II.3.5 Clean interior of UT-3. Underground tank to be visually inspected by PGE.

II.4 Second, UT-4

- II.4.1 Skim oil from tank and pump into labeled drums.
- II.4.2 Blot oil sheen from surface of liquid in tank.
- II.4.3 Pump water into oil-water separator skid tank.
- II.4.4 Skim oil from oil-water separator skid tank into labeled drums.
- II.4.5 Pump water from oil-water separator skid tank through two ACAUs connected in series at a rate not to exceed 30 gallons per minute to the city sewer.
- II.4.6 The suggested ACAU vendor is Calgon Corporation, and the unit is the Disporsorb 350-gallon carbon capacity.
- II.4.7 PGE and the City of Portland will take samples of the liquid at the sample ports on the ACAU at their discretion.
- II.4.8 Remove and barrel sludge from tank for storage, transport, and disposal by PGE. Each barrel shall be labeled.
- II.4.9 Clean interior of UT-4. Visual inspection of underground tank to be by PGE.

II.5 Third, Skid Tank (liquid to be processed not to exceed 13,000 gallons)

- II.5.1 Liquids from the barrels will already be batched into a portable oil-water separator skid tank. This tank to be supplied by PGE.
- II.5.2 Skim oil from oil-water separator skid tank into labeled drums.

II.5.3 Store drums for disposal by PGE.

II.5.4 Engineering approval is required prior to pumping batched water through ACAU's to the city sewer.

Phase III - DEMOBILIZATION

III.1 Purge

Pump clean, potable water through the system to remove residual tank liquids.

III.2 Dismantle Equipment

III.2.1 Pressure wash and drain skid tanks.

III.2.2 Drain ACAUs.

III.2.3 Drain piping, disconnect sections of pipe, and remove pipe ramps.

III.2.4 Clean and remove pump system.

III.2.5 Disconnect ACAUs.

III.2.6 PGE to dispose of ACAUs as required.

III.2.7 PGE to dispose of Hypolon liners.

III.3 Tank Closures

Replace lids to tanks and secure against re-entry, per PGE instruction.

III.4 Pressure Wash

Equipment, tools, and materials to be removed from the site shall be cleaned using pressure washer.

III.5 Removal

Remove equipment pumps, skid tank, piping, berm, liner, and fencing.

III.6 Final Report

The final report to PGE shall include original or copies of data on samples, results of analyses, permits, invoices for equipment and materials, transportation invoices, daily field notes, drawings, specifications, and documentation of disposal. Any pertinent correspondence with governmental agencies during operation shall be copied to PGE.

2-20-89	RELOCATED PUMP STAGING AREA, REROUTED PIPELINE AND ISSUED FOR BIDS	DBH				WEL	RVD
2/7/89	ISSUED FOR BIDS	DBH				WEL	RVD
DATE	DESCRIPTION	BY	CHK.	DFS.	ENGR.	SUPV.	MGR.
REVISIONS							
PORTLAND GENERAL ELECTRIC COMPANY PORTLAND, OREGON							
<p align="center"><u>STATION "L"</u></p> <p align="center"><u>UNDERGROUND STORAGE TANKS</u></p> <p align="center"><u>DEWATERING PIPE ROUTE PLAN</u></p>							
APPROVALS		SCALE 1" = 60'					
DESIGNER WELAWSON		DRAWN BY DBH					
DESIGN ENGR. WELAWSON		CHECKED BY					
ENGR. SUPV. <i>John Biddle</i>		DATE 10-10-88					
ENGR. MANAGER		SKETCH					